

Claims

1. A receiver device comprising:
 - a) at least two receiving elements for receiving radio signals through at least two respective different receiving paths;
 - 5 b) combination circuit means for combining signals received through said at least two different receiving paths; and
 - c) common receiver means for processing said combined signals in a common multi-carrier path.
- 10 2. A device according to claim 1, wherein said receiving elements comprise sector antennas adapted to receive signals only from respective predetermined angular sectors.
- 15 3. A device according to claim 1, further comprising: at least two diverse receiving elements for providing at least two respective diverse receiving paths; diverse combining means for combining said diverse receiving paths; and common diverse receiving means for processing signals received through said combined diverse receiving paths in a common diverse multi-carrier path.
- 20 4. A device according to claim 3, wherein said diverse receiving elements comprise sector antennas of a diverse antenna arrangement, said sector antennas being adapted to receive only from respective predetermined angular sectors.

5. A device according to claim 4, wherein said predetermined angular section covers approximately 120 degrees.
- 5 6. A device according to claim 1, wherein said receiver device comprises a base transceiver station.
7. A device according to claim 1, wherein each of said combined signals comprises a plurality of channel signals.
- 10 8. A device according to claim 7, wherein said combining means is adapted to generate a multi-carrier signal by allocating different carriers to said channel signals of said combined signals.
- 15 9. A device according to claim 8, wherein said common receiver means comprises baseband channelizing means for generating channelized data from each of said channel signals.
10. A method of receiving a radio signal, said method comprising the steps of:
- 20 a) receiving radio signals through at least two respective different receiving paths;
- b) combining signals received through said at least two different receiving paths; and
- c) processing said combined signals in a common multi-carrier path.

11. A method according to claim 10, further comprising the steps of allocating a carrier of said common multi-carrier path to each channel signal provided in said combined signals.
- 5 12. A method according to claim 11, wherein said received radio signal is an EDGE signal received via a wideband receiver.
13. A method according to claim 12, wherein handover of signals from/to different sectors is performed by using a common receiver and processing.
- 10 14. A method according to claim 10, wherein said received radio signal is an EDGE signal received via a wideband receiver.
- 15 15. A method according to claim 10, wherein handover of signals from/to different sectors is performed by using a common receiver and processing.
16. A receiving device comprising:
 - at least two receiving elements to receive radio signals through at least two receiving paths;
 - 20 a combination device to combine signals received by said at least two receiving paths; and
 - a common receiving device to process the combined signals into a common multi-carrier path.

17. A receiving device according to claim 16, wherein said receiving elements comprise sector antennas adapted to receive signals only from respective predetermined angular sectors.
- 5 18. A receiving device according to claim 16, further comprising at least two diverse receiving elements to provide at least two respective diverse receiving paths; a diverse combining device to combine the diverse receiving paths; and a common diverse receiving device to process signals received through the combined diverse receiving paths in a common diverse multi-
10 carrier path.
19. A receiving device according to claim 18, wherein said diverse receiving elements comprise sector antennas of a diverse antenna arrangement, said sector antennas being adapted to receive only from respective predeter-
15 mined angular sectors.
20. A receiving device according to claim 19, wherein said receiver device comprises a base transceiver station.